AUGUST • 1961

Supervisory Management

CUT THOSE PROBLEMS DOWN TO SIZE

All your problems
can be little ones.

DISCIPLINE UNDER THE UNION CONTRACT

It pays to know how
an arbitrator would decide.

TOOLS FOR METHODS IMPROVEMENT

Almost any job can be simplified
somewhere along the line.

AMERICAN MANAGEMENT ASSOCIATION

"This I Believe..."

The Quality of Life

By Raphael Demos

Professor of Philosophy
Harvard University

LIFE HAS these two facets: the career on the one hand, and the warmth and substance of personality on the other. There is *doing*—the life of action—and there is *being*. What a man is is as important as what he does.

Deeds are for all to see and admire; they are celebrated in song and poetry. But the quality of life and the flavor of a personality, while not measurable and seldom observable, are no less worthy of esteem.

—from "The American Image of Success"
in *Harvard Business Review*

SUPERVISORY MANAGEMENT, August, 1961, Volume 6, Number 8. Published monthly by the American Management Association, Inc. Publication Offices, 10 Ferry Street, Concord, N. H. Editorial and Business Offices, 1515 Broadway, New York 36, N. Y.

Address all correspondence to SUPERVISORY MANAGEMENT, *American Management Association, Inc., 1515 Broadway, New York 36, N. Y.* Please notify us of change of address *six weeks in advance,* and include postal-zone numbers in all addresses.

Subscriptions: $12.00 per year (AMA members $8.00); bulk rates available at substantial discounts. Single copies $1.00 (AMA members $.75). Second-class postage paid at Concord, N. H. The Association does not stand sponsor for views expressed by the authors in articles issued in or as its publications.

Printed in U.S.A.

VOL. 6 NO. 8 • AUGUST 1961

Supervisory Management

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CUT THOSE PROBLEMS DOWN TO SIZE

By Raymond Dreyfack

Director of Tabulating Systems
Fabergé Perfumes

Don't sidestep problems; cut them down into manageable parts.

THE PLANT MANAGER of an aircraft-parts factory was talking with the personnel director.

"Jim," the manager said, "Charley Evans is being promoted to group foreman in six weeks, and we'll have to fill his job. Charley's been holding down a key spot on the floor, and I want to make sure we get the right man for it. Got any ideas?"

The personnel director went through his files.

"Ralph Lewis seems made to order for the job," he said. "He's been with the company eight years, his record is good, and he has just the kind of experience you want. He's also been Charley's assistant for over a year and he's familiar . . . What's the matter? Is there anything wrong with Lewis?"

"He's everything your record shows," the manager replied. "My only kick is that he's not aggressive enough."

"Aggressive? What do you mean?"

"He doesn't face problems head on. Last year, for example, when Charley was on vacation and Lewis was in charge, there was trouble with one of the machines. It was a question of repairing a part, or ordering a new one. It was a problem he could easily have solved by costing out the two alternatives. He asked me about it, though, and I told him to use his own judgment.

"The upshot was that he left the machine idle until Charley came back, and turned the problem over to him. That's what I call passing the buck. This job calls for a man with more confidence, a guy who can face up to problems squarely. I could give you other examples, too," he added.

Shaking his head, the personnel director made a note on Lewis's personnel card. The job went to someone else, and Lewis was handicapped by the reputation that was summarized now on his personnel card: "Sidesteps problems."

It takes courage

The higher a man climbs, the more experience he acquires, and the more responsibility he is asked to assume. It takes initiative, good judgment, and sometimes courage to step into a situation in which the action needed is not self-evident, to analyze the problem, and then to move ahead to the solution.

To management this is the ability that separates the men from the boys; it is usually considered essential for promotion.

Of course, a supervisor wants a reliable and competent staff, but it is essentially his own responsibility to face problems and solve them.

What's the problem?

Broadly defined, a problem is any situation in which a course of action isn't self-evident or already determined. But that doesn't mean that all you have to do is to sit down with a pencil and scratch pad, and ask yourself, "Now, what is it about my job that isn't self-evident or already determined?" You'd probably end up scratching your head instead of the pad.

Instead, the best way to solve a problem is to break it down and analyze its components.

In a chemical company, the plant superintendent called all foremen together and gave them an economy pep talk.

"Business is good," he said, "but our costs are rising too fast. I'd like you to review your operations and recommend improvements. A month from now we'll get together again and see what we've come up with."

In the meeting, the foremen discussed the problem and decided to try to solve it by a system of careful

analysis. Then they went back to their departments and examined each step of each procedure. They took nothing for granted. They questioned each direct labor factor as they came to it, and applied the same technique to materials and equipment. They also held interviews with their subordinates to get their ideas.

Step by step

Step by step, they asked questions like: Is this task necessary? Why is Chemical A being used, when Chemical B is less expensive? What happens to the waste produced by Step 11? Is any part of it reclaimable? What about the scrap factor in Step 7?

They went about it the way you would go over the details of an auto trip you were planning, to make sure you were taking the best roads and not overlooking any short cuts, and to be sure you had packed everything you needed and nothing you didn't need.

The upshot of all this analysis? As just one example, the annual savings added up to more than $8,000 on a single item a supervisor checked.

An ounce of prevention

Anything that increases costs should be considered a problem. Cutting problems down to size is an art, but it's even more of an art to anticipate trouble and head it off.

How many problems come up every day because a machine is not ready or a material is not available when it is needed? You can prevent situations like these by projecting your needs and requirements.

Delay is one of supervision's worst enemies. Putting off the solution until tomorrow usually creates even more problems to be solved.

How to Tackle Your Problems

Face facts, even though they're unpleasant. Side-stepping and buck passing have never been known to solve a problem.

Analyze your problem. Break it down into its components, by going over it step by step, factor by factor.

Anticipate your problem—anticipate future requirements, think ahead.

Enlist employees' help. Get them interested and encourage their suggestions.

Put it in writing. This may clarify your problem, and even indicate a solution.

Do it now. Ignoring a problem won't make it go away; dawdle and delay only make it worse.

GET AN ASSIST

THERE'S USUALLY more than one way to solve a problem. Other people's experience and viewpoints can broaden your own. You can learn a lot from:

1. *Your subordinates.* They're directly involved in your problems; and they may come up with some worthwhile answers.
2. *Your superiors.* Their over-all scope may give you a fresh point of view.
3. *Other supervisors.* They've had similar problems; maybe they've found solutions to pass along.
4. *Reading.* Nothing covers as much territory as reading; keep up with trade publications, technical magazines, bulletins, newspapers.
5. *Special training.* New developments are going on in industry every day. Special courses can help you keep abreast.

Rising costs today are a major problem for supervisors. One company found that in two successive accounting periods, essentially the same production was charted, but the scrap factor went up more than 10 per cent.

To find the difficulty, the supervisor reviewed the entire operation on a step-by-step, or segmented, basis. This involved checking the specifications of materials used, and checking the written procedure against the actual procedure to make sure that each operation was being performed properly.

The next step was to look at manpower. At one stage of the operation the supervisor ran into what looked like a clue to the scrap problem. A crack crew of five men who were originally on the job had been transferred to a pilot operation in another department. The replacement crew seemed to be the main source of the scrap increase.

On closer investigation, the supervisor found that one member of the crew, unable to maintain the pace of the others, was rushing his work to the point that his performance was below par. The other members of the crew, not wanting to get him into trouble, hadn't called this to the supervisor's attention. But a step-by-step analysis of the long, complicated operation made it possible to determine exactly at what point inefficiency was creeping in.

Spotting personal problems

As far as the supervisor is concerned, *all* problems that take place in his department are his problems,

whether or not he's personally involved in the details. Problems created by materials or machines are—or should be—revealed by production statistics, month-to-month and interdepartmental comparisons, and other records.

Problems with people, however, are usually more subtle. Human problems may concern the job specifically, or they may involve general attitudes and relationships.

The foreman of one department noticed that a worker's production was declining compared to his past performance. The foreman discussed the problem with the employee, and learned that he was in serious financial difficulty. He was worried and upset, and his anxiety was affecting his output on the job. When the company offered to help get him out of the woods financially, his production perked up.

Personal problems that affect the job come up every day. Employees may develop resentments against other employees or against management. Clashes can develop. Bitterness may smolder unnoticed for a long time, but it will be reflected in unhappiness—and in lowered work standards.

As long as the supervisor remains ignorant of these problems, they won't be solved. The answer is that he must be receptive, open-minded, and sympathetic. If he is, and if he cuts the problems down to size, he'll go far in building up the performance of the people involved.

Try some paperwork

When a problem is obvious enough to be stated simply, it usually takes only a simple action, or a series of simple actions, to solve it. A complex problem, however, can involve several factors and items of cost. The first move would be to put it in writing.

Just putting a problem down on paper may be enough to suggest solutions. Often, the problem exists in the first place only because the situation has not been thoroughly defined.

The vacation system, for example, is a headache in many companies. One payroll supervisor was embarrassed by management's pointing out faults in the way vacation pay was handled. He decided to try spelling out the system on paper.

This clarification immediately revealed weaknesses in his setup. Writing down each step in detail underlined for him exactly what criteria—for instance, length of service, or payroll classification—should determine the vacation system.

Any busy supervisor runs into problems he can't stop to solve immediately. But problems that are ignored can multiply faster than rabbits in a carrot patch. Some way must be found to keep track of them.

The answer is simple: a notebook with three or four column headings. Enter the date, a brief description of the item, and the date you should take action. Get into the habit of jotting down your thoughts *as they occur;* memory can be tricky.

Some supervisors feel that there's something wrong with asking for help in solving problems—that they've got to go it alone. But they're mistaken. The most successful supervisors welcome help from all sources. In fact, the more complex the problem, the more reference sources you should use. Without extensive collaboration, scientific research would never have made the strides we see today.

In general, your outside help can include: 1) *other supervisors,* whose ideas may supplement your own; 2) *subordinates,* who, because of their closer association with certain details, may give you specialized insight and may come up with new ideas of their own; 3) *your superiors,* whose broad experience may suggest short cuts or guide your ideas; 4) *visits to other companies,* and consultations with their employees; 5) *literature*—trade publications, management magazines, and bulletins; 6) *training* through specialized instruction, either private, community, or company sponsored. The fastest way to change a problem into a solution is to learn more about it.

Using these resources, supervisors today are finding rewarding answers to difficult problems, and they're reaping personal satisfaction—and recognition.

One of the best ways to get help from other people—whether it's other supervisors, subordinates, or your superiors—is to pool their know-how, perhaps in an informal meeting, a brainstorming session, or a more formal conference.

Take the experience of supervisors at American Cyanamid's Bound Brook, New Jersey, plant. Here, cost cutting, considered by most companies to be supervision's number-one problem-solving responsibility, is attacked in a dynamic program, which was initiated by the manager of dyes manufacturing, Dr. R. C. Conn. Committees are set up consisting of groups of first- and second-line supervisors and foremen.

Their objective is to investigate all areas of potential cost reduction, communicate the need to the people involved, exchange ideas and evaluate results—and follow through, translating ideas into action. The program has had remarkable success: A single committee, for example, came up with ideas that have saved the company $14,000 annually.

The problem pow-wow

Naturally, meetings must be properly conducted to yield good results; handled haphazardly, they can be an expensive waste of time.

For one thing, it's not smart to call a meeting the minute a problem crops up. Meetings should be resorted to only when other means of finding an answer have been exhausted—when it is necessary to draw all viewpoints together for a mutual hearing and exchange.

If you want other people's help in problem solving, you've got to be receptive to their ideas. Being receptive means not just listening to suggestions—nor even just accepting them; it means giving full credit to anyone—especially among your own subordinates—who makes a good suggestion. You'll find, too, that recognition encourages still further cooperation; it also tends to increase your supervisor's respect for you.

Meet them head on

Whether your problems are big or small, simple or complicated, you'll solve them best by seeking them out and facing them squarely. It's the people who can solve problems who get ahead; it's the sidesteppers who stay where they are. ♦

Apparatus That's Almost Alive

U.S. LABORATORIES are staking about three million dollars a year on research in a virtually unknown field of science, reports *Business Week*. The field is *bionics*—an attempt to use biological systems as models for machines.

This means not only the study of how biological systems function, but an attempt by scientists to describe the function of certain organs —such as the eye and the ear—in the form of a mathematical equation. The final step will be to reproduce the relationships of this equation in a piece of electronic equipment—a man-made machine that will perform with near-human ability.

Why pattern machines after biological systems? Take this example, from studies of the frog: When a frog is hungry, its eye screens out all unnecessary information—everything except the moving fly it needs for food. Similarly—if scientists can arrive at that point by way of a mathematical formula—a satellite's eye could adapt itself to what the satellite needs to know, and pick out the precise information it is sent up to get.

Recent progress indicates that the attempt to devise machines patterned on living organisms is within the realm of possibility. Scientists at Cornell Aeronautical Laboratory, for example, have constructed an experimental machine that can automatically identify objects or patterns, like letters of the alphabet, more or less as the human brain system does.

This opens up what seem like fantastic prospects for industry, as well as for the military and the medical profession. Bionics promises to bring, among other things, machines that read and report, and machines that hear and understand. On a more down-to-earth scale, it would mean better and simpler television-picture reproduction and more efficient telephone equipment.

DISCIPLINE under the Union Contract

Richard L. Schiffer
Knigin & Eschen

Here's why some disciplinary decisions go wrong.

IN TODAY'S UNIONIZED COMPANY, the harsh tactics or summary dismissal once commonly used against employees who broke company rules have been replaced by the formalized procedure known as corrective discipline. Under this system, an employee can be disciplined only for "just cause" (or "good and sufficient cause"—or however the contract phrases it).

The disciplinary action gives the employee an opportunity to mend his ways. It is usually stated in writing, and a copy of the statement is given to the union. Finally, it is subject to protest and ultimately to appeal to an impartial tribunal, usually arbitration.

Though, in principle, workers accept this system as both fair to the individual and necessary for law and order in the plant, disputes over discipline are still the largest group of grievances that go to arbitration. While some of these cases are, of course, unavoidable, many arise simply because management is confused about the basic principles of corrective discipline.

Your Disciplinary Responsibilities

Remember you have obligations both to your company and to your employees.

Don't act without thinking, no matter what the provocation. If you are too harsh, an arbitrator may reverse your decision. If you are too lenient, you may be asking for repeated infractions of company rules.

Know the union contract. Its terms are subject to interpretation, of course, but you should be thoroughly familiar with them.

Most cases don't go to arbitration, of course. But many could be settled earlier and more satisfactorily if the supervisor paid heed to the guidelines that can be observed in typical arbitration rulings. Here are some major errors in discipline, as shown in actual arbitration cases from the files of the American Arbitration Association.

What is "just cause"?

One of the biggest pitfalls is the failure to satisfy the requirement of "just cause." In fact, arbitrators themselves define "just cause" in two different ways.

One school holds that only two considerations are involved—whether the employee did commit the improper act and, if so, whether he should have been punished for it. Once these two elements have been established, say followers of this line of reasoning, the arbitrator cannot substitute his judgment for management's and rule that punishment was too harsh.

But if the arbitrator thinks the punishment actually *was* too severe for the offense, he will probably try to find some reason for not sustaining the company. After all, his personal sense of justice colors his reasoning, no matter how objective he tries to be. In this case, he will probably let the employee off the hook by finding either that the company failed to prove its charge or that there were extenuating circumstances that made punishment unjustifiable.

Does the punishment fit?

The other school of thought considers a third element—whether the punishment fits the "crime." If an arbitrator of this school finds that the penalty imposed by the company was too severe, he will reduce it, on the theory that the standard "just cause" gives him authority to do so. The company lost the following case because it didn't appreciate this point:

Harry was a machine operator in

a container-manufacturing plant. For 19 years, he had had a perfect conduct record. But one morning he lay down to nap during the ten-minute break and failed to get up at the starting whistle.

Because of his previous record, the company decided to impose the lightest punishment ever given for sleeping on the job—a five-day suspension. The union protested on the grounds that the punishment did not fit the crime. When the case came to arbitration, the arbitrator found for the union. The five-day suspension, he said, was light only in the sense that no one had ever received a lesser penalty. Under the facts of the case, it was unreasonable and inequitable punishment. He ordered the penalty reduced to a one-day suspension. If the company had initially suited the punishment to the offense—or picked an arbitrator from the other school of thought—it would probably have won its case.

A double-header

Many companies are plagued by the double-headed question: What constitutes appropriate disciplinary action, and how do you make it stick? Consider the following case:

One afternoon, Steve, a helper in a manufacturing plant, ducked out to a nearby luncheonette for a cup of coffee. When he got back, he was handed a dismissal notice stating that he not only left without permission, but, by failing to punch out, showed that he intended to let the company pay for time he didn't work. This, said the company, was dishonesty that justified summary discharge.

The union admitted that Steve had broken a company rule, but said that discharge was too severe a penalty for a first offense. "First offense!" replied the company. "Just look at this record."

Steve's record was as long as your arm and indicated that he had made a habit of breaking every rule in the book. The company had been keeping close tabs on him, quietly noting infractions without saying anything to him—apparently in hopes of giving him enough of the proverbial rope.

The union was surprised but hardly nonplussed. "Well!" said the shop steward. "A secret file—just one more bit of evidence that you were discriminating against Steve."

The arbitrator held that since the company had not disciplined Steve for the earlier violations, it could not consider them in this case. He regarded the unauthorized coffee break as a first offense and commuted the discharge to a two-week suspension without pay.

Several points in this story are worth noting. For one, a secret record is worse than no record at all. Its contents can never be used against an employee, and its existence may be used by the union to substantiate a charge of discrimination.

In the same way, a secret witness can only harm management. The very reasons management has for keeping him secret prevent his ever being produced in person; and his alleged existence gives rise to disturbing speculations among the employees. Perhaps, the rumor runs, the company has planted a spy. Some employees may ask, "Have the rest rooms and lockers been 'bugged'?" Others may question whether the informant exists—or whether he is only a figment of the personnel manager's imagination.

What grounds for discharge?

Steve's case also illustrates the fact that management loses considerably more of its discharges than its lighter discipline cases. The arbitrator is usually loath to sustain such severe punishment, particularly if the employee is an older man or has considerable length of service or family responsibilities.

For a first offense, the arbitrator is likely to uphold discharge only if the violation constituted either a breach of a serious safety rule or practice—smoking in a danger area, for instance—or an act of serious moral wrongdoing, like fighting with a weapon. He will probably find other offenses amenable to corrective discipline, which does, after all, set the stage for discharge if the offenses continue.

But isn't stealing time, as Steve did, morally serious enough to warrant first-offense discharge? That depends, say the arbitrators, on whether it amounted to premeditated theft or merely to pilfering or borrowing on the spur of the moment.

If there has been deliberation, most arbitrators uniformly sustain first-offense discharge even though the intrinsic value of the stolen object may be negligible. Discharge was sustained when an employee with 20 years' unblemished service was caught coming to work an hour before reporting time to load his car with scrap pipe valued at $4, and when an employee was found sleeping in a hidden bunk he had put together with pillows, blankets, and a mattress.

But when it comes to an impulsive act, like slipping out for a cup of coffee, most arbitrators hold that discipline, not discharge, is the appropriate answer to a first offense.

Double jeopardy

Another pitfall for management is double jeopardy. As a rule, the company has three to five working days after the offense in which to decide what disciplinary action to take. Once the action has been taken, imposing a greater or additional punishment for the same action is double jeopardy.

Just after he has committed an offense, however, the employee may be told by his supervisor to go home and wait until he hears from the company—perhaps because he refused to follow an order, or was

creating a disturbance, or for any comparable reason. If so, the company may, and should, refuse to pay the employee for the balance of that day. (Of course, if it later decides that the supervisor's action was not justified, it should pay the man for the time he lost.)

No one could seriously contend that the employee has yet been disciplined; the supervisor's step was purely a preventive measure. Discipline involves management's notifying the employee of the penalty it has decided on. Any disciplinary action the company takes after sending the man home will thus be the first and only punishment. The union may claim that the company punished the employee by not paying him for the rest of the day he was sent home. But he wasn't paid because he did no work, and it was his own conduct that prevented him from working.

Here's an illustration of the double-jeopardy principle:

At work one day, Pete took a quick nip from a bottle he had brought into the plant. The foreman caught him and told him—as disciplinary action—to go home and not to come in for the rest of the week. This amounted to a suspension of a little over three days.

Because Pete had committed a comparable offense before and had been disciplined for it, the personnel manager decided to discharge him. Actually, said the arbitrator, the company could have fired Pete on the spot. But since he was only suspended, the union's claim of double jeopardy was valid.

It would have made all the difference in the world, the arbitrator pointed out, if Pete had been sent home pending a final decision. Pete was reinstated with back pay.

The double-jeopardy charge is

Know the Arbitration Pitfalls

The supervisor should be able to anticipate the pitfalls that may come up in arbitration. Here are some common ones:

1. Failure to satisfy the arbitrator's requirement of "just cause" for disciplinary action. What appears just to you may not appear just to the arbitrator.
2. Imposing discipline too severe for the misdemeanor.
3. Basing specific discipline on previous, unreported infractions. Secret files should be taboo.
4. Double jeopardy. If you impose a penalty at the time an employee breaks a rule, you cannot do any second-thoughting later. The first penalty sticks.

made also when management denies an employee a promotion or merit increase because of a bad conduct record. According to the union, he has already been disciplined, and the denial therefore amounts to punishing him again. But this contention does not hold up. Says the arbitrator, "An employee's past-conduct record is a legitimate evaluating factor. Indeed, this is one of its primary functions. The employee is not being punished again—he is just not being rewarded."

It should be noted that when the company grants a promotion or merit increase, this, in effect, wipes out any previous black marks on the employee's record.

Demotion vs. discipline

When it comes to dealing with poor work performance, management's action must be determined by whether incompetence or negligence is the cause of the inadequacy. Each has its own proper remedy, and using the wrong one is a big mistake.

Louis was a Grade-1 lathe operator with several years' experience. For a time, his work was satisfactory, but then, three times in a single month he turned out units which, because they exceeded permissible tolerances, had to be scrapped. The company demoted him to Grade 3, where tolerances were not critical.

"His carelessness has cost us a great deal of money," it stated at the arbitration hearing. "The contract gives us the right to discipline for 'just cause,' and that is what we are doing." The arbitrator found for the union.

Management may, of course, discipline an employee for negligence, —but demotion is not discipline. And while the company may demote him for incompetence, it may not discipline him for it.

If the company wanted to demote Louis, it should not have charged him with carelessness, but should have laid a foundation for demotion by warning him in writing that he was not meeting the duties and responsibilities of his job, and by sending a copy of this notice to the union.

But if, on the other hand, the company wanted to discipline him, it should have sent him a written reprimand. Instead, it tried to discipline him by demotion and thus short-circuited its case.

Monkey wrench in the grievance machinery

In another case, an employee walked off the job rather than accept demotion. After talking with the union a week later, he filed a grievance demanding reinstatement in his former job but indicating willingness to take the lower-rated one if he had to. The arbitrator refused to reinstate him in either position, holding that the impulsive act of walking out instead of following the grievance procedure had cost the employee his job.

This points out a moral that cannot be overemphasized: If the contract does not spell out an orderly procedure for handling grievances, the employees and the union may raise them at any time or place and in any manner; but if it does establish such a procedure, they may not present their grievances except in the manner set forth.

An employee may not refuse to follow an order given by his supervisor unless it requires him to commit an unlawful act, run a health or safety risk not called for by the nature of his job, or make a serious sacrifice. No matter how strongly he may believe that it violates the contract or his contractual rights, he may not, on pain of disciplinary action, challenge its propriety except according to the grievance procedure.

A union representative has an even greater duty to respect and uphold the contract. Though a management order clearly violates the contract, he must advise the employee to obey it. Otherwise, he, too, is subject to disciplinary action.

When a new man came to the shop, the foreman told Phil to keep an eye on him and give him a hand. "Okay," said Phil, "provided I get the 10-cent wage differential for being group leader." The foreman replied that the assignment did not amount to acting as a group leader. He turned down Phil's demand, reminding him that he could file a grievance on it later.

Phil remained adamant, and the foreman ordered a three-day suspension for insubordination. The arbitrator found that if Phil had followed the order he would have been entitled to the differential he claimed. But because he had refused, the arbitrator ruled, disciplinary suspension was justified.

Put it in writing

Another cardinal rule is that corrective discipline consists only of action that has been noted in written statements of which the union has been given a copy. Thus, oral warnings or reprimands will not support a discharge. This doesn't mean that the supervisor shouldn't try to correct an employee by counseling. For most employees, a word of caution is enough.

But when a situation demands disciplinary action, the company must put it in writing. The union is entitled to notice because, as a party to the collective-bargaining agreement, it may challenge the company's action even if the employee does not want to.

Setting the penalty

The supervisor should determine the penalty after discussing the situation with his superiors. Unless the penalty is specified in the contract or rules, his decision should take into account factors like the employee's length of service, his conduct record, and any personal difficulties or mitigating circum-

stances, all of which play an important part in the arbitrator's decision.

Management should not make a practice of imposing the same punishment on all employees who commit the same offense, for two reasons: First, his uniformity is incompatible with "just cause"; and second, if there were ever a break in uniformity, the company would be open to a charge of discrimination.

If an employee does not respond to oral counseling, a written reprimand is the proper initial action for simple offenses like unjustifiable refusal to work overtime, and unexcused lateness or absence.

For more serious offenses, such as creating a safety hazard or participating in a wildcat strike, suspension would be in order. As a rule, suspension should not be for fewer than three or for more than ten working days.

If the employee has received a written reprimand but commits the same improper action, or a comparable one, the next step is suspension.

The employee who fails to respond to suspension forces the company to discharge him. Or, as one noted arbitrator puts it, he actually discharges himself.

For the discipline of union officers and agents, an important modification is needed: because of their dual role, and to overcome the possible charge that the company is gunning for them, a second written reprimand should precede suspension.

As long as the arbitrator continues to sit on discipline cases, then, managers had better know how he is likely to decide, if they want their disciplinary action to stick. ◆

It's Still "Safety First"

AUTOMATION may have reduced some safety hazards, but it hasn't eliminated all of them, said Glenn Griffin of the National Safety Council recently. In fact, he explained, some on-the-job hazards have increased. "Some men feel that, once a machine sets the pace, nothing must stop it. Others may become bored and do dangerous things just to provide a little interest and excitement."

Furthermore, he added, "an important new hazard in automated operations is that of lines that are being shut down and then started up while somebody is working on them or near enough to them to get caught.

"In automated plants," Mr. Griffin said, "it's so important to keep the line running that maintenance men will try to make minor repairs and adjustments while the machinery is operating. One way to reduce this problem is the good old safety practice of scheduling preventive maintenance."

IF YOU WERE THE ARBITRATOR...

By Morris Stone

Editorial Director
American Arbitration Association

Time Out for Coffee

FOR A LONG TIME, the foreman of a group of bench assemblers had been concerned about abuse of coffee breaks. The employees were supposed to have ten minutes each morning and afternoon, but it had been the custom for them to take that time at will. As a result, it was impossible to know who was taking three breaks a day instead of two or stretching the ten minutes into twenty.

All the foreman could say for sure was that with all the comings and goings, production was dropping.

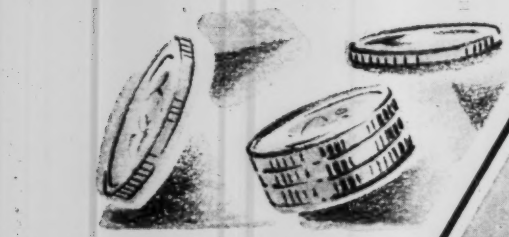
After discussing the matter with the personnel manager, the foreman announced a new rule: From then on, all coffee breaks would be taken at a set time.

The employees didn't like the new policy and lost no time in filing a grievance. The union insisted that the rule constituted a change in working conditions and therefore could not be put into effect unilaterally. Management answered that the contract did not restrict the making of rules, and that therefore this matter was within the area of "management's reserved rights." Furthermore, the personnel director said, the contract didn't say anything about coffee breaks at all; so any such privileges were completely gratuitous. This issue eventually went to arbitration.

How would you decide this case?

_____For the union?
_____For the company?
_____Compromise? If so, how?

The arbitrator's decision is given on page 49.



CONTROLLING LABOR COSTS

PART 3: TOOLS FOR METHODS IMPROVEMENT

By John D. Staley

Director of Industrial Relations
Genesco

Your own group can help you cut costs.

IN A SUPERVISOR'S EFFORT to keep labor costs under control, he has to start by building an effective working team, which takes selection, orientation, and training. Then he can work on improving productivity by improving the performance of below-average producers.

If he's done all this—and, naturally, it's not as easy as it sounds—the supervisor should have a well-organized, efficient department. But even so, his costs may be higher than they should be.

His next step, then, is to get down to the details of work methods, and to work on streamlining them.

No special techniques, no charts or graphs, and no amount of engineering will do the job without the full acceptance and cooperation of the employees who must work with the methods you streamline. And employees' cooperation is not always easy to win. As Roethlisberger and Dixon pointed out in their classic study of human relations, *Management and the Worker,* the employee finds himself "in the position of having to accommodate himself to changes which he does not initiate. . . . He cannot hold to the same degree the sentiments of those who are instituting the changes."

Winning cooperation

It's up to the supervisor, then, to motivate employees to want to improve their own jobs. It's not enough to tell an employee that technical advances and methods improvement are good for the economy. "So what?" he may well say. "What's in it for me?" It means a great deal more to him to know that he is not going to lose earnings, status, and skills.

This doesn't mean that he can be bought off; he doesn't want that either. He does want the opportunity for security, recognition, and a sense of belonging.

When you're thinking of streamlining work, of course, you've got to consider the adverse effects of oversimplifying. If an employee's work is reduced to monotonous, short-cycle operations, and if skill factors the employee is proud of are removed, productivity can, and probably will, slope off.

The work-simplification approach

The term "work simplification" was first coined by E. H. Schell. Over the years, the group headed by A. H. Mogensen have been vocal and highly successful proponents of this program.

Simply put, work simplification is "the organized use of common sense to find better and easier ways of doing work." It consists of three phases: appreciation, education, and application.

In the appreciation phase, the entire organization gets a chance to learn what work simplification is and what it can mean to the individual employee. This phase is designed to sell cost-mindedness throughout the department.

In the educational phase, the actual procedures used in simplifying work are taught—by means of roundtable conferences—to the entire employee group.

In the application phase, the tools, techniques and devices are put into action. The action is followed up, and the results are measured.

Participation is the key

Any program for methods improvement should assume that the man on the job knows the job best, and that with proper training he can always find a better way to do it. Results strongly support this assumption. In classic suggestion plans, the best suggestions usually come from management people, but in work simplification the number of valuable improvements suggested by the rank and file has been found to be vastly increased.

A suggestion plan simply encourages people to propose improve-

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This article was adapted from a new book, *The Cost-Minded Manager*, by John D. Staley. © 1961, by the American Management Association.

ment for cash rewards. Work simplification, on the contrary, relies heavily on group action, scientific methodology, training, and follow-up. The security, recognition, and enthusiasm that stem from participation create a potent incentive for improvement.

Training is, of course, a must. Employees don't know intuitively how to simplify operations and reduce costs; they need instruction in the tools and techniques for methods improvement. This instruction should be given in sessions where employees are encouraged to participate fully—to ask any questions and to make any suggestions that occur to them.

The flow-process chart

Flow-process charting is a useful technique for improving work methods. It lists and charts all the steps in the present method of performing a given task, and proposes a new method. The chart usually has space to show operations performed, transportations, inspections, delays, and storages—all indicated by symbols —and the sequence of these events. It shows distances covered and time spent. (See Chart below.)

Getting dressed in the morning seems like a simple enough routine, but you could probably do it more efficiently. If you broke the job down into its component parts, and listed them on a flow chart, you would probably find that you could save steps and time just by laying out your clothes in advance, in the order in which you were going to put them on. You could probably combine "operations" and "inspections" and generally simplify every

No. _____

METHOD	PRESENT		PROPOSED		SAVING	
	NO	TIME	NO	TIME	NO	TIME
OPERATIONS						
TRANSPORTATIONS						
INSPECTIONS						
DELAYS						
STORAGES						
TOTAL						
DIST. TRAVELLED		FT.		FT.		FT.
TOTAL COST						

DEPT. _____ DATE _____

MADE BY _____ SHEET ____ OF ____

OPERATION _____

DIST. IN FEET	TIME IN MIN.	OPERATION	TRANSPORT	INSPECTION	DELAY	STORAGE	DESCRIPTION OF PRESENT METHOD	DIST. IN FEET	TIME IN MIN.	OPERATION	TRANSPORT	INSPECTION	DELAY	STORAGE	DESCRIPTION OF PROPOSED METHOD
		○	⇨	□	D	▽				○	⇨	□	D	▽	
		○	⇨	□	D	▽				○	⇨	□	D	▽	
		○	⇨	□	D	▽				○	⇨	□	D	▽	
		○	⇨	□	D	▽				○	⇨	□	D	▽	
		○	⇨	□	D	▽				○	⇨	□	D	▽	
		○	⇨	□	D	▽				○	⇨	□	D	▽	

detail of getting dressed. The same principles apply to a plant or office operation.

When the existing method is recorded, the flow-process chart graphically illustrates the job being studied. When the proposed method is charted in the same way, you get a clear comparison of the number of elements, their sequences, the distances involved, and some valuable leads for action. With some experience, you can almost always find ways of simplifying and improving operations when you see the comparison.

Flow diagram

The flow-process chart is often combined with the flow diagram, which is simply a floor plan on which the flow of work for a specific operation is charted, arrows showing the direction work flows from station to station, and the distance between them, so that you can compare the present layout with a new system.

Just like the flow-process chart, this diagram helps illustrate bottlenecks, delay points, unnecessary operations, peaks and valleys in work loads, and other problems. You would see at a glance, for example, if an employee was taking too many steps to get from his work station to a tool bin when a simple rearrangement might save many steps and much time.

Together, the flow-process chart and the flow diagram are an unbeatable combination for studying, testing, and simplifying work.

Man-machine diagram

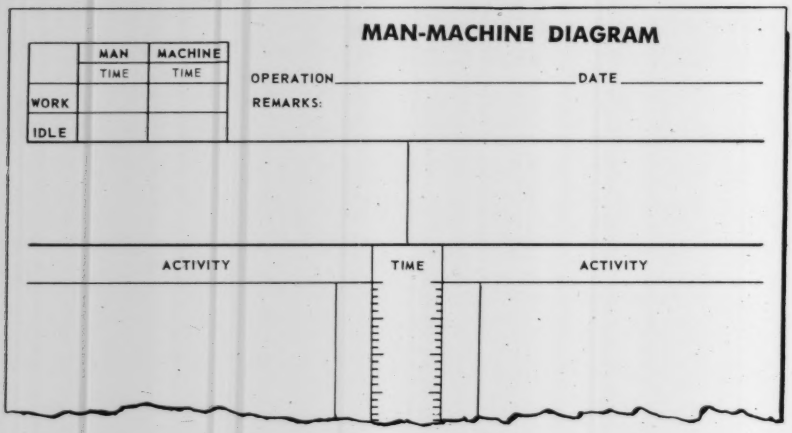
These two forms can be used in conjunction with a man-machine diagram. This shows the interrelated activities of an operator and the machine or equipment he uses. (See Diagram page 22.) By listing the step-by-step activities of the man on the diagram opposite the activities of his machine, the chart shows how the two might be better coordinated.

For example, if the machine is idle a good part of the time while the operator is busy packing and positioning work, and if he, in turn, is idle while the machine is performing its work, it's a sure bet that the work of each could be better distributed. The operator could preposition Lot B in a jig or fixture, for instance, while the machine was processing Lot A. While Lot B was running through the machine, the operator could pack Lot A and preposition Lot C.

The man-machine chart shows up inefficiencies that are often startling to any cost-minded manager—especially when they've been going on for a long time without his realizing it.

Right-and-left-hand charts

An extension of the man-machine chart is the right-and-left-hand chart, which diagrams the activities of a person's right and left



hands in an operation. In packing hardware to be included in a knocked-down-furniture carton, a worker might tend to hold the envelope or sack in one hand and, with the other, pick up the hardware piece by piece and drop it in.

If you recorded this on a right-and-left-hand chart, listing, motion by motion, what each hand was doing, you would see that the "holding" hand was idle during most of the cycle. It would be more efficient to use a fixture to hold the sack. If the fixture could hold two sacks, gripped and released by a foot pedal, both the operator's hands would be busy, in a more pleasantly rhythmical motion.

Work sampling

Work sampling is based on the statistical theory of random sampling. When samples of an activity are taken at random, you can predict certain characteristics of the whole operation.

For example, rather than record all the activities for all the working hours of the entire staff, you can observe just at random intervals. If you make enough observations truly at random, you should get an accurate picture of what's going on.

To prepare for work sampling, make a chart on which you list the activities that make up the job. Opposite each, tally your observations. When you tabulate and analyze the observations recorded on this chart, you can see the relative amount of time spent on each activity.

You may find, for example, that an operator spends 10 to 15 per cent of his time getting materials or trying to get the materials-handler's attention—obviously, a disproportionate amount of time. Once you know this, you shouldn't have any trouble cutting the time down: You

find out why the material isn't readily available, and then correct the situation to make it available.*

Tools for planning

These tools for methods improvement can be as useful for planning new operations as for simplifying old ones. If you chart the proposed operation ahead of time, you may find potential short cuts and savings that you might otherwise miss. And, even in your planning, it's a good idea to enlist the cooperation of the employees who are going to be involved.

It's infinitely better to start a new operation at top efficiency—and with the proper budget—than to have to make sweeping changes and cut costs once it's under way. Naturally, the employees working on the operation may later come up with suggestions that hadn't occurred to anyone in the planning stage. But you'll be a lot better off if you can anticipate the bigger problems.

The prime ingredient

There's no question that the most important ingredient in improving methods—and in cost control in general—is the manager's determination to make his program work, and to make it work *with the cooperation of his work group*. The supervisor who is determined, who runs his program intelligently, will see tangible improvements as his costs go down. But his greatest satisfaction of all will come from knowing that he has done an important job well. ♦

* For further details on work sampling, see *"Stop-Motion" Activity Sampling*, by Ernest Schleusener, in SM, Jan., 1961.

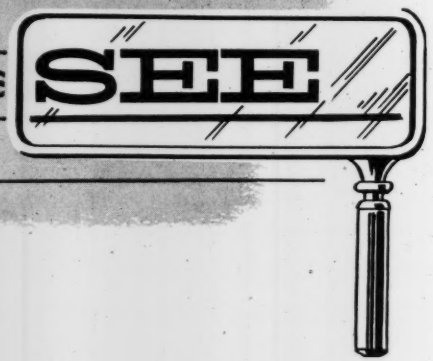
This is the last of three articles on controlling labor costs, beginning in the June issue of SM.

Hiring: Bias toward Youth?

PREJUDICE AGAINST hiring older workers seems as entrenched as ever, despite repeated warnings by the U.S. Labor Department about the coming labor shortage, reports *Personnel*. In a survey of 152 large U.S. companies, Dr. James R. Morris—a senior economist with the American Enterprise Association—found that 50 years *or younger* is the top age limit for men hired for hourly paid jobs in 37 per cent of the companies, for men in salaried jobs in 40 per cent of the companies.

The survey found that the responsibility for turning older applicants away often lies with the supervisor. About 36 per cent of the companies said that if two equally qualified applicants were sent to a supervisor, he would usually hire the younger one. Only 3 per cent said that the older person would be hired.

SEE TO IT THAT THEY CAN SEE



By Lois Balcom

Do your subordinates have adequate vision? The answer may surprise you.

A LEADING OPTICAL COMPANY has examined the eyes of hundreds of thousands of people in more than 2,000 different jobs. It has found that company-wide vision testing, which helps insure adequate vision for every employee, has these results:

1. Reduction of waste
2. Reduction of accidents
3. Reduction of labor turnover
4. Reduction of training costs
5. More effective selection and placement
6. Reduction of absenteeism
7. Improvement of employee relations

How many of these advantages would you like to see right in your own department?

It is obvious that every one of them would contribute enormously to improving your over-all production record.

A lot to learn

More and more large firms are undertaking extensive company-wide vision-testing programs. However, not every company can do this. Especially for medium-sized or smaller companies, the cost of hiring specialists or buying equipment can be prohibitive.

But there's a lot to be learned from the experience of the larger companies that have these programs. And a supervisor can apply the principles in a smaller-scale departmental eye-care program for his own employees.

What do the large-scale programs show? In the first place, management has often made the mistake of assuming that people who have visual defects already know about them and probably have done something about them. Yet whenever vision testing is inaugurated across the board, 30 to 60 per cent of employees are found to have visual deficiencies in terms of the requirements of their particular jobs. And, as surprising as that may seem, it is still more surprising that many employees are not even aware of serious defects, like one blind eye!

What you don't know . . .

This is not so hard to understand, however, when you consider that a person with partial sight makes an adjustment to his condition, usually at the expense of one "good" eye which carries most or all of the load. That person often has no way of knowing that he is not seeing as far, nor across as wide a field, nor as clearly, as the next person.

A much more common eye condition—probably the most common of all—goes unnoticed even more often. This is a natural change in the lens of the eye, called presbyopia, which makes it impossible to focus at close range. It catches up with most people sooner or later, usually when they're about 40. Its onset is gradual, and so is most people's adjustment to it. Thus, "beginning presbyopes" are often slow to realize that their eyesight is no longer adequate for the work they are trying to do.

What does it mean to you?

How many people do you supervise: 5? — 10? — 50? — 200? As many as 3 out of 5—5 of the 10—15 or 18 of the 50—and from 60 to 120 of the 200—may have eye defects serious enough to interfere with their work. That could make a big difference in the operation of your department.

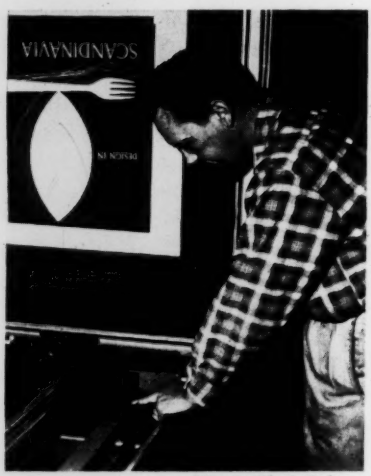
The outlook needn't be too gloomy, however. The experience of the big companies also reveals the gratifying fact that about 90 per cent of these defects are correctible. You needn't be faced with a wholesale upheaval—replacements or reassignments, for instance—if you work toward bringing the vision of all your subordinates up to scratch *for the requirements of their present jobs*. Most of the people with visual

deficiencies will still be at the same jobs when it's over—but they'll be doing them better.

. . . and your subordinates?

Employees are usually ready to do their part when they realize how important visual adequacy is to their own productivity—and often to their earnings. In the Owensboro, Kentucky, Tube Plant of General Electric, a testing program revealed that the number of workers whose eyesight was below standard for the jobs they held ranged from 29 to 60 per cent, in various departments. The average for the whole plant was 39 per cent. And the employees who did meet the standards averaged four cents an hour more than those who did not. When employees had corrected their eye defects with proper glasses, their piecework earnings jumped. One man raised his pay nine cents an hour. People who were not on piecework also benefited, as their performance ratings showed.

Two steps must be followed before eye correction is possible: *job analyses* to determine the visual requirements of each job, and *indi-*



Photos: Clark Holmes

Range of Vision Required for a Job

Above, left: Photolithography cameraman checks negatives with a hand magnifier at a 6-to-8-inch working distance. Above, right: Cameraman reads scale settings 25 inches away. Here the copy holder is in a vertical position. Opposite page: Cameraman placing copy in holder must see from 16 out to 38 inches to center copy.

vidual tests to match visual qualifications to these requirements. You can personally contribute a great deal to the job analyses; and you can do more than you may realize to encourage workers to have their eyes tested on their own.

Visual job analysis

First, get busy with a tape measure and a pad and pencil, and make a rough analysis of each job you supervise. Then, when your subordinates go to their own eye specialists for individual examination, they will have all the information they need about their jobs.

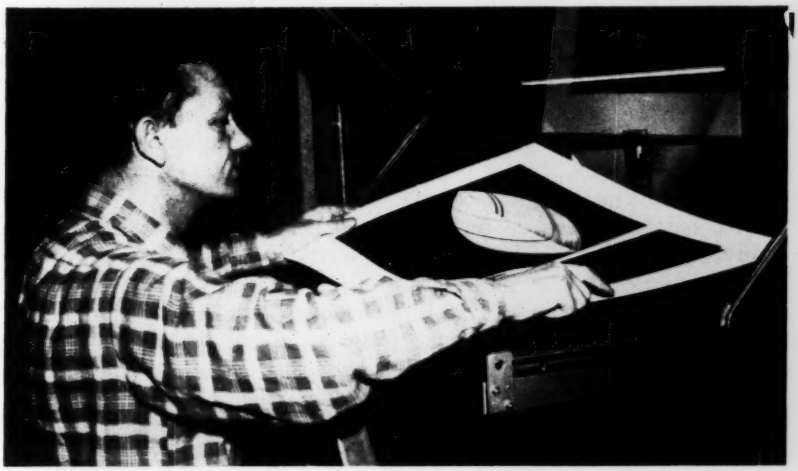
Here are the first points to check in your analysis:

1. *Distance at which each operation* is performed.
2. *Direction of gaze*: Down?—up?—or at eye level?
3. *Size of work area*: Concentrated in one spot?—or over a wide sideward or up-and-down sweep?
4. *Objects looked at*: Moving or still?—bright or dark?—clearly contrasted against their backgrounds or hard to distinguish?

If you would like help with this, your company's medical department or a local eye specialist should be able to guide you. Or use the Visual Job Analysis on page 29. Free additional copies of the analysis blank are available from Univis, Inc., an optical manufacturer at Dayton, Ohio.

Above all, be sure to notice *everything* each worker does on the job. It's all too easy to think only of one major requirement and forget the rest.

For example, *a machine worker* may concentrate on feeding mate-



rial into his machine—let's say at 12 inches from his eyes and downward—and forget about a counting gauge, at arm's length and above eye level, which he must also watch. Or *a desk worker* measures to the point just under his nose where he writes and works on figures—and overlooks the 33- to 60-inch desktop, which may be covered with reports, records, and an adding-machine keyboard, which he must also be able to see clearly and without strain.

Individual tests

If you have encouraged the workers' full cooperation, your job analyses should lead naturally to individual testing. Just bringing out the special visual demands of each job will make employees aware of the need for checking their vision. It may be enough to get an employee to realize that fatigue, eyestrain, headaches—or other discomfort he may have had—could be the result of a visual inadequacy he hadn't been aware of. If he does realize it, he probably won't need any urging to get his eyes checked.

Other people may be less inclined to take immediate action. If your observations suggest that examinations are needed, some individual counseling may be in order. You'll have a better basis for observing each worker at his job when you have full information about the visual demands of each operation. You should also watch the general record of each of your subordinates, for the following symptoms:

1. Is his production record slipping?
2. Does he tend to drop or bump into or knock over things?
3. Does he complain of poor light?—poor visibility in any part of his work area?
4. Does he act groggy and tired?
5. Does he report often to the medical department for headaches or stomach aches?

Any of these symptoms may indicate that a person's eyes need attention. You can at least remind him of the stake he has in good vision—of the likelihood that his efficiency and productivity, as well as his health and comfort, will improve at once if he corrects visual defects.

"Custom-tailored" glasses

Many people do not understand the wide range and flexibility possible today, which make glasses suitable for specific occupational needs. Not long ago, a compromise or all-purpose prescription was the best the optical profession could do.

Bifocals, it's true, take care of two different distances in one pair of glasses. But in many situations, neither the far part of the lens nor the near (the "reading" segment), is exactly right. This is why so many people have found bifocals hard to get used to. There tends to be a "jump" or a blurry zone between the two distance extremes.

VISUAL JOB ANALYSIS

(This check list will provide a rough analysis of the nature of visual tasks.)

1. *Job description.* Give job title, machine operated, or material used: _____

2. *Work distances:* Near _____
   Intermediate _____
   Far _____

3. *Central working area*
   A. Size: _____ ft. _____ in.
   Comment: _____
   B. Depth: Gross _____ Fine _____ Flat _____
   C. Motion: Rapid _____ Slow _____ Rotating _____
   Vertical _____ Horizontal _____ Other _____
   Constant _____ Intermittent _____ Fixed _____
   D. Illumination at work points:
   Bright _____ Dim _____ Glares _____
   Comment: _____

4. *Detail for discrimination:* Fine _____
   Gross _____
   Comment: _____

5. *Visual attention required:* Continuous _____
   Intermittent _____
   Casual _____
   Comment: _____

6. *Surrounding field*
   A. Area of operation: Large _____ Small _____
   Comment: _____
   B. Illumination: Bright _____ Good _____ Dim _____
   C. Illumination contrast to central working area:
   High _____ Low _____ None _____
   Comment: _____

7. *Protective eyewear recommended?* Yes _____ No _____ Type _____

8. *Unusual visual demands* _____

This check list adapted courtesy of Univis, Inc., Dayton, Ohio.

Today's *multifocals* are a different story. They can provide for three —or even four—different focuses. New laboratory techniques have made dozens of variations possible.

Let's look at a few of the less common ones: An electrician, a painter, or a carpenter must often work directly overhead. The conventional bifocal with its "near" segment at the bottom of the lens is not much use to him. Instead, he can have the near-vision segment at the top—or he can have it at both top and bottom in what is called a double-segment bifocal.

If, on the other hand, a machine worker's close work is at nearly eye level while he needs greater range for "stepdown vision"—climbing stairs or ladders, moving around a crowded floor, or walking a narrow scaffolding—he can have a "ribbon" strip for near vision, with room below and above it for distance vision.

Whatever the field, the most common need in multifocal prescriptions is for a trifocal lens that includes a third, *intermediate* distance—say from 27 to 50 inches, or to arm's length and a little beyond. This is the range that has never before been adequately taken care of, yet it is *frequently the most crucial distance in the total job setup.* (As a matter of fact, this is the answer to the problems of both the machine worker and the desk worker. Usually this intermediate segment is just above the "near" section of the lens of the glasses.)

Keep up with changes

Some workers who are already wearing glasses may need a checkup as much as people who have never had a prescription. Their newly acquired information about visual requirements for the job may well mean that they can get a different and better prescription, to suit their eye correction to their particular work as well as to make them generally more comfortable.

Besides, eyes continue to change with age. The correction needed by the 40-year-old beginning presbyope may not be adequate for the more advanced presbyope five—or even two or three—years later.

It has been estimated that of the 80,000,000 Americans who wear glasses, at least 10 per cent are making do with prescriptions that are far out of date.

Again, this situation is not solely a matter of economizing nor even of laziness. It is often unawareness.

Far-reaching results

To the people you supervise, individual efficiency and eye comfort are bound to be the most important aspects of occupational eye care. But don't forget the far-reaching results that you, as their boss, can expect.

In a radio plant, the increase in hourly production expected with increased experience on the job varied as follows for workers who met visual standards and those who did not:

Months on the Job	Visual Standard Met	Visual Standard Not Met
1-2	32 units/hr.	25 units/hr.
2-4	42	31
6-8	50	31
12 and over	56	31

These groups were of similar age, experience, education, etc. Note that people with inadequate vision not only began with a smaller output, but reached their peak quickly and then stopped improving.

In a silk mill, comparative studies were made before and after testing. Over a three-month period, a group of workers with defective vision who had obtained corrective glasses improved their production 4.21 per cent. Workers in a control group who had presumably normal vision and had received no treatment improved their output only 1.19 per cent.

And look at what can happen to absenteeism: A small company found that absenteeism decreased by a third following its vision-testing and follow-up program. Twenty people who had been absent frequently because of headaches, fatigue, and nervousness went through the next six months without losing a day. Apparently, the cause of their trouble had been removed.

If the record held out no other promise than this, the supervisor would have plenty to gain and nothing to lose by stimulating his subordinates' interest in adequate vision for their on-the-job needs. ◆

Beware of Bull's-Eyes

THERE WAS A MAN who was thought to be the best rifle shot in the county: All the barns around his house had bull's-eyes painted on them, every one of them hit dead center. A neighbor asked him how he hit so many bull's-eyes. He replied, "It's easy. I shoot first and then draw rings around the hole."

On the job, employees observe those of us who help in their development and training, for we must really score bull's-eyes. We are the role models for our subordinates, in the work setting.

We must grow; we must develop. Our subordinates will mirror our strengths as well as our weaknesses. And we must train them to think beyond today, for the problems of tomorrow will be different.

—JOHN PERIAN
in "A Lagniappe For You"
Personnel Information Bulletin, February, 1961

LET'S GET DOWN TO CASES

Every month, SM presents true stories of problems supervisors have faced. How would you solve them? You might discuss the case with a group of people—fellow supervisors, family, friends. Each person, you'll find, has his own way of looking at the problem.

A Question of Priority

BRUCE IRVING is the typing-pool supervisor for an up-and-coming advertising agency, Rutherford and Wright. It's a busy operation; the few individual secretaries in the company type only correspondence, and the typing pool turns out a vast volume of copy and estimates.

This morning at 9:30, Steve Wright, one of the partners, called Bruce into his office.

"Bruce," he said, "can you handle a rush job for me? This is messy copy and it's late—but I was up most of last night working on it. I need to have it typed in quadruplicate. Put the carbons on loose-leaf paper and insert them in these notebooks; deliver the originals to the art department. They have to have the copy by 3 to get it ready by 5—when I'm leaving for the airport. I know this is pressing you but it's important. Can you manage it?"

"I'm sure we can, Mr. Wright," Bruce said. "The girls are busy, but there's one job we can hold till tomorrow. I'll put three good typists on it right away."

He took the stack of copy back to the pool and divided it among Gloria, Muriel, and Joanne—his three best girls and the ones he knew would be able to decipher the corrections and turn in a quality job. By noon, the job was more than half done and it looked fine. Just for insurance, Steve asked the girls to work through the lunch hour; they could leave an hour early to make

up the time. He arranged for sandwiches to be sent in to them, and went out to lunch himself.

When he came back at 1, only two of the girls were in the room—and only one, Gloria, was working on Mr. Wright's copy. She had the whole stack in front of her and was pounding away at jet speed. Joanne was copying a large chart propped up on her desk, and Muriel was not in the room. Her desk was clear, except for an unopened paper bag.

"What happened?" asked Bruce.

"Mr. Nagle came in right after you left," Gloria explained. "He said he had a rush job that had to be done right away for Mr. Rutherford. We told him we were working on a rush job, but he said Mr. Rutherford's job was more important. He gave Joanne those charts to copy, and he hauled Muriel off to Mr. Rutherford's office to take dictation right on the typewriter. Muriel hasn't even had her lunch."

As he counted to ten, Bruce looked at the pile of copy. Gloria was a fast typist, but she couldn't possibly get this job done on time. And this wasn't the first time, he reflected, that his boss, office manager Joe Nagle, had walked in and overruled his instructions.

Consider these questions—and ask your own:

1. If you were Bruce, what would you do to meet the immediate situation? _____

2. Do you think anything Bruce either did or left undone helped to bring about the situation? If yes, what? _____

3. If you were Bruce, how would you approach Joe Nagle about this problem? _____

4. How can Bruce set up a procedure to handle future emergencies? _____

Readers Discuss SM Cases

Here are readers' discussions of June's case.

A copy of *Leadership on the Job*, AMA's handbook for supervisors, has been awarded to each of this month's contributors.

The Man Who Changed His Mind

(June, page 37)

Case synopsis:

Entering his department, Hank Borkel saw his subordinates talking at the water cooler. They all became quiet except Dan Milligan, whose back was toward him. Dan was talking about poor management of the department and failure of raw stock to arrive that morning; he added that he had a fine suggestion for Hank.

Hank challenged Dan to offer it. Dan, red-faced, complained about the missing stock, changed specs, and wasted time on new setups; he then charged that Hank wasn't doing anything about the situation. Hank, stung because he had made the same complaints to his own superiors, retorted that Dan's production rate was below average and that he was always goofing off for cigarettes.

Dan blew up and retorted that he was quitting—but that he'd finish out the day. A little later, Dan, who has been with the company for five years, apologized and said he'd like to stay on. Company policy permits reinstatement of an employee who quits —but only with loss of all seniority. Hank hasn't reported the quit yet.

Human reaction

HANK ACTED "HUMAN" and was right in speaking up to Dan in front of the group. He took the opportunity to tell them he knew about each man's production rate and the abuse of smoking privileges.

But he should then calmly have invited Dan into his office, listened to his gripes, and helped turn them into constructive suggestions.

—ROBERT F. POWELL
The Supervision Institute, Purdue University, Lafayette, Ind.

A considered decision

AFTER CONSIDERATION, Hank should decide what to do in light of company policy on quits. He could ask himself these questions: Does Dan's experience outweigh his below-average production? What changes can he expect in Dan's attitude if Dan is reinstated? What effect will this have on morale?

The employees should understand their part in attaining the over-all objective of improvement.

—H. L. FURMAN
Stauffer Chemical Company, Elkton, Md.

It would take a Solomon

IT WOULD TAKE a Solomon to decide this case. Hank must consider what effect *any* move he makes will have on his subordinates. If he lets Dan off, others may complain. If Dan is penalized, he could complain that since he quit in a moment of anger, he doesn't deserve the penalty.

Hank should give Dan a week off without pay, but allow him to retain his seniority.

—JOSEPH STONE
Personnel Technician, City of Cincinnati, Cincinnati, O.

They Agree

The following contributors agreed on these points: 1) Hank was wrong in criticizing Dan in front of the group and should have discussed matters with him privately; and 2) he should reinstate Dan without loss of seniority.

Other comments made by these contributors follow.

HANK COULD HAVE ignored what he overheard and enjoyed a good laugh with the group at Dan's obvious discomfiture. He could then have explained difficulties in getting raw stock on time and what was being done to eliminate them. There was merit in Dan's criticisms, which probably expressed the viewpoint of the group. Hank's remarks served only to hurt Dan's feelings and rob him of his dignity.

—EUGENE L. ROLLEIGH
Powerhouse Engineer, Reynolds Metals Company, Bauxite, Ark.

TO IMPROVE MORALE, Hank should set up an effective system of handling raw stock. He could maintain a stock inventory and order ahead to maintain a steady production flow. The person responsible for stock supply would have to cooperate, of course.

He should hold a short meeting of the group to let them know that the matter had been cleared up.

—WALTER F. THOMSON
Senior Staff Assistant, The Bell Telephone Company of Pennsylvania, Philadelphia, Pa.

HANK PROVOKED Dan into quitting.

He should have periodic, private discussions with each subordinate to let him know how he's doing.

Hank should review with Dan the events leading up to his quitting and admit to Dan that he was in error. Dan seems to have a strong say with the group and it won't be long before the gang knows that Hank "does something about it."

—LESLIE HARPER
Compounding Supervisor, Polymer Corporation, Ltd., Sarnia, Can.

THIS COMPANY'S performance-review policy should be strengthened. Someone from Production Control or Purchasing should be invited to speak to the group about difficulties with inventory control. Hank should ask for the group's suggestions, and if they can't be used, explain why.

—I. GELLEN
Project Engineer, International Business Machines Corporation, Kingston, N. Y.

HANK HAS NEITHER the confidence nor the respect of his subordinates and Dan is an agitator.

Hank should criticize Dan's speech at the water cooler and tell him that he will be fired if such a situation happens again. He should try to channel Dan's abilities along constructive lines, perhaps into leadership.

He should hold a meeting of the entire department to discuss reasons for slowdowns; which slowdowns are necessary, which are not, and why; what can be done during down time; and what he intends to do to reduce work stoppages.

—C. J. YOUNG
Field Manager, Custom Engineering, International Business Machines Corporation, Utica, N.Y.

HANK ACTED WITH RESENTMENT and sarcasm. He should have continued on to his office and then called Dan into his office to let Dan talk.

He should apologize to Dan—not for what he said, but for saying it in front of the group.

—CASE STUDY SEMINAR
Central Louisiana Electric Company, Eunice, La.

HANK SHOULD HAVE anticipated the raw-stock shortage and planned other work for his subordinates.

He should have explained to the group why the shortages existed, when the material would arrive, and what was expected of them.

Hank undoubtedly accepted Dan's apology and extended his own. Everybody makes mistakes.

—KENNETH KROOG
Electronic Associates, Inc., Long Branch, N.J.

HANK SHOULD make a careful review of planning and scheduling. He should study work assignments, check records, and determine the frequency of delays and the amount of time involved. He should then go to his superintendent and give him the facts as well as suggestions for

improvements. Then he should explain to the men exactly what he has done.

—CHARLES S. JOANEDIS
Staff Assistant to the Manufacturing Manager, Tidewater Oil Company, Delaware City, Del.

HANK SHOULD HAVE explained to the group what he had done to correct the situation and calmly demanded Dan's apology.

Hank should post a notice about each production problem. It should include the names of people delegated to solve the problem and a target date for the solution.

—JOHN F. FUSCO
Production Planner, The Thomas & Betts Company, Inc., Elizabeth, N.J.

THERE IS A SERIOUS morale problem in the department, shown by lack of communication between Hank and his subordinates. Hank evidently doesn't know why the material is not on schedule or why specs have been changed. Hank's superiors must let him know about contemplated changes.

—BASIL J. SMITH
Production Control Manager, The Singer Manufacturing Company, Elizabeth, N.J.

HANK SHOULD EXPLAIN to Dan that he was doing something about the stock situation. He should also counsel Dan about work performance and attitude and invite his suggestions. Dan should be warned that if the situation happens again, his resignation will be processed.

—MADELINE A. KAMIN
Training Supervisor, Liberty Mutual, Lynbrook, L.I., N.Y.

WHAT'S YOUR OPINION?
YOU CAN WIN A BOOK!

Send in your opinions on this month's case, for publication in SUPERVISORY MANAGEMENT. *Or send a case of your own—a tough situation either you or a supervisor you know has faced.*

If your comment or case is accepted for publication, you will receive an award: a copy of Leadership on the Job, AMA's 300-page handbook for supervisors.

Send your contribution to Let's Get Down To Cases, SUPERVISORY MANAGEMENT, *American Management Association, 1515 Broadway, New York 36, N. Y.*

Letters on this month's case should be postmarked no later than July 31.

Can you afford to send your child to college?

By Peter C. Reid

Here are some angles on how to swing it.

IF YOU HAD SENT your son to Princeton in 1804, it would have cost $684 for the entire four years—$378 for board; $164 for entrance fees, tuition, room rent, and use of library; $48 for laundry; $56 for firewood; $18 for servants' wages; and $20 for candles.

Today, a Princeton education costs about $12,000—and that doesn't include servants.

If you're a parent—even if your children are still in kindergarten—you can hardly be blamed for feeling slightly panicky when you read figures like this. College costs have been heading for outer space at a terrifying clip, without any sign of a letup. Depending on the college, expenses can run from $1,000 to $3,000 a year—and they may double by 1970.

Plenty of resources

But this doesn't mean you should feel hopeless about the prospects of sending your children through college. Many financial resources are available, and new ways of meeting college costs are being developed.

The federal government, for example, has a $300,000,000 loan program allowing college students to borrow up to $5,000 to finance their education. New loan programs have been created by banks and other private agencies. Insurance companies have come up with plans for families who want to start saving early for their children's education. Many large corporations give scholarships to children of their employees, and there's a wide range of other types of scholarships.

Still, the going isn't easy for the family with a medium-sized income. In a study made recently by the Survey Research Center of the University of Michigan, 4 out of 10 families that had sent children through college reported a severe strain on their budget.

Yet more and more families seem to find this strain worthwhile. In 1955, about 2.5 million students were enrolled in college in the U. S. and Canada. This year it's about 4 million, and by 1970 it's expected to hit 6 million. A college education is no luxury these days—it's needed not only for a successful career, but for the many satisfactions it provides by broadening and deepening one's knowledge.

BUILD A FUND

Later, we'll discuss the resources available to the family with a child who is at or near college age. But let's assume now that your children are young—still many years from college.

You can make use of the years to build up a sizable educational fund for them. It may not pay all their expenses, but it will make the burden considerably lighter.

Here are some ways you can build a fund.

Savings accounts

You should investigate the different types of banks in which you can build a savings account. One is a savings-and-loan association—which can also be known as a building-and-loan association, a cooperative bank, savings association, or homestead association—which generally pays dividends between 3½ and 4½ per cent. At 4 per cent, if you deposited $25 a month for 15 years, you would have $6,166 for an investment of $4,500.

Mutual savings banks, found primarily in the Northeast, usually pay lower interest rates than do savings-and-loan associations. Commercial banks are still lower. If you belong to a credit union, however, you can depend on an interest rate of about 4 per cent.

Government bonds

If you buy government "E" bonds and hold them until they mature in

eight years, you'll earn 3¾ per cent interest.

Insurance endowments

In recent years, more and more families have been turning to endowments to build up an education fund. One reason is that large insurance companies have developed endowment plans specifically designed to help pay for a college education. You should compare all the plans offered, since they vary in their benefits and flexibility.

One company offers an educational endowment policy in units of $4,000. When the child enters college, a quarter of the endowment is paid each year for four years. If the father should die before the endowment is paid up, insurance provides that the child will get the full fund when he reaches college age. If the father becomes disabled, the premiums are waived until he's able to work again.

Premiums are payable from the start of the policy until four years after the endowment payments begin. For example, if a 35-year-old father with a six-year-old child bought a $4,000 endowment to begin when the child is 18, he would pay $285 a year for 15 years. Accumulated dividends would give him a return of $108 on his $4,275 investment.

Another insurance company attaches a rider to a regular insurance policy that allows as many as 25 years to pay for a college fund. This plan makes possible a substantially smaller premium than in traditional endowment policies.

A third large insurance company has a package plan combining an endowment to pay for the first two years of college with a loan to finance the last two. The cost can be spread over 8 to 12 years. This plan is for parents with children in the eighth, ninth, or tenth grades.

One important advantage an insurance endowment has over a savings account is that the educational fund will be paid in full if the father should die. On the other hand, although endowment dividends give you some return on your investment, a savings account with a good interest rate will give you more.

For example, instead of investing $285 a year in an insurance endowment, the 35-year-old father above might have put $300 a year in a savings account at 3¾ per cent interest. At the end of 15 years he would have $6,000, a return of $1,500 on his $4,500 investment.

It should also be pointed out that if you start an insurance endowment in middle age, higher premiums will eliminate any return on investment.

Moreover, if you need money in an emergency, you can always withdraw your savings. Until the eighth year of your endowment policy, you can take out only part of what you've invested.

Long-range saving does have one possible disadvantage: If the inflationary trend continues, the money

WHAT WILL IT COST?

These figures should give you some idea of what it will cost per year to send a student to college.

	Private liberal-arts college	Private university in your city	State university in small city	Municipal university
Tuition and fees	$1,000	$1,000	$300	$500
Books and supplies	100	100	100	100
Room rent	260		275	
Board	500	150	500	150
Travel	100		100	
Clothing and incidentals	300	250	250	250
TOTAL	$2,260	$1,500	$1,525	$1,000

Courtesy National Parent-Teacher Magazine

you save now will be worth less in 10 or 15 years.

Buying stocks

Investing money in common stocks for your children's education has the advantage of hedging against inflation. You can get a bigger return from buying stocks than from savings or insurance: If you had invested $25 a month in sound common stocks starting 15 years ago, you might have ended up with about $15,000 for an outlay of $4,500. But stocks go down as well as up. Unlike a savings account or insurance endowment, buying stocks is a gamble.

If you decide to buy stocks, several methods are available. You can pick them yourself through a broker, invest regularly through a "plan" like the Monthly Investment Plan offered by member firms of the New York Stock Exchange, or buy shares in a mutual fund. Two information sources are: *How to Buy Stocks,* by Louis Engel (Bantam Books, New York, 35 cents) and *Stock Buying Guide* (No. 421, Fawcett Publications, N.Y., 75 cents).

What if your child is almost ready for college and you haven't built up a fund to pay for it? It's too late to start saving and probably too much of a strain to pay the whole cost out of current income. But many resources are still available to you.

LOANS

Borrowing is just beginning to come into its own as a way of meeting the high costs of higher education. Until recently, few families used credit to pay college bills. But with the stimulus of rising costs—and the recently created National Defense Student Loan Program—

loans are playing a much larger role. Even considered only from a financial viewpoint, borrowing money for college is a worthwhile investment: It's estimated that on the average, a college graduate will earn $100,000 more in his lifetime than a nongraduate.

If you do decide to borrow, you'll find a rapidly growing variety of loan programs specifically designed to help finance a college education.

National Defense Student Loans

Through the National Defense Student Loan Program, for example, a superior student needing help may borrow as much as $5,000 (but not more than $1,000 in any one year). Preference is given to students planning to teach in elementary or secondary schools, and those studying science, engineering, mathematics, or a modern foreign language.

Repayment terms are liberal: The student starts repaying the loan a year after it's made, at no interest until he has graduated. Then he continues repaying at 3 per cent annual interest (far lower than commercial rates), with ten years to complete payment.

The student should apply for the loan through the college at which he is accepted. A list of the 1,400 institutes of higher education that participate in the program is available from the U.S. Department of Education in Washington, D. C.

There is no charge for this information.

Bank loans

Banks are also developing education-loan plans. One large New York bank provides a combination savings-and-loan program which can be started when the student enters high school or is in his sophomore or junior year in high school. The parent makes regular payments which earn interest at the bank's current rates for savings deposits. When the child enters college, the bank begins paying the costs.

After the accumulated savings have been exhausted, the bank advances the rest of the money needed and begins charging a true annual interest rate of 6.3 per cent.

For example, if you started a $12,000 program when your child entered high school, you could take 10 years to complete payments, at a cost of $487 in interest charges and life-insurance premiums. The insurance provides that the educational payments will be made even if the parent dies.

The same bank will make a straight education loan when the child is ready for college or after he has started college. Repayment periods are shorter, with a maximum of six years, but the interest rate is also 6.3 per cent.

Other banks have similar education-loan programs or are starting them. If there's more than one available where you live, compare their costs and benefits.

Banks in some states will also make low-cost loans directly to stu-

dents, through plans developed by the state. So far, Massachusetts, New York, Maine, Indiana, Delaware, and Rhode Island have such plans.

Each of the states guarantees the loans, enabling the participating banks to charge low interest rates of 4 to 6 per cent. Usually, only legal residents of the state are eligible for these loans.

Special agencies

Some agencies specialize in financial aid for higher education. In one plan used by 500 colleges, the parent arranges to pay off the college fees monthly to the agency. If the arrangement is for more than one year, the plan is covered by insurance, so that payments to the college will continue if the father dies. The charge for this service varies from 4 to 6 per cent according to the length of the arrangement. Payments can be stretched out over six years.

Agencies that offer this and similar services are The Tuition Plan, Inc., 1 Park Avenue, New York 16, N.Y., the Insured Tuition Payment Plan, 38 Newbury Street, Boston 16, Mass.; and Midland Time Plan for Education, Marine Trust Building, Buffalo 5, N.Y.

Many associations, companies, foundations, alumni clubs, and other groups have also set up college-loan funds.

SCHOLARSHIPS

The word "scholarship" has taken on a new meaning in recent years. Traditionally, it's been a money prize awarded to a student for exceptional ability or achievement—regardless of need. Now, although the student must have a sound record and promising potential, his need for help has become the paramount factor in the size of his scholarship.

It's not a good idea to depend on a scholarship to pay all or most of your child's college expenses. Latest surveys show that scholarships now

FOR MORE INFORMATION, READ . . .

Financial Aid for College Students: Undergraduate. By Theresa Birch Wilkins. Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. $1.00.

How to Finance a College Education. By W. Bradford Craig. Holt, Rinehart and Winston, Inc., New York. $1.95.

Lovejoy-Jones College Scholarship Guide. By C. E. Lovejoy and T. S. Jones. Simon and Schuster, Inc., New York. $1.95.

provide aid for only 20 per cent of college students and contribute only 2 per cent of the total expenses of all college students. But since a wide variety of scholarships is available, you should investigate them as a possible source of aid.

College grants

Where do you look for scholarships? Colleges themselves are the major hunting grounds, but a student would be wise to choose the college he wants to attend rather than the one where he thinks he can get the biggest scholarship. Chances are that the college he chooses offers scholarship grants to qualified candidates.

Although qualifications for scholarships vary, the student who expects to get one should have a sound school record, perform well on the required tests, and show that he really needs financial aid.

In awarding scholarships, colleges expect the family to assume as much of the costs as it can.

Scholarship service

The College Scholarship Service, an organization which gathers financial information from families applying for scholarships, has worked out a table showing what it expects from families with various incomes.

For example, it is assumed that a family with an $8,000 income and three dependent children will be able to contribute $840 a year toward a college education.

Other sources

Corporations and foundations have been boosting their support of education sharply in the past few years, with many offering scholarship grants.

An organization specifically created to dispense college grants is the National Merit Scholarship Corporation, which administers a nationwide system of scholarships using funds supplied by the Ford Foundation and the Carnegie Corporation. Awards are made according to the costs of the college and the need of the recipient—they range from $100 to $2,200. Candidates for these scholarships must enter the competition in the spring of their junior year in high school. They can get applications from their high-school guidance director.

Several corporations contribute scholarship funds directly to colleges, which then make the individual grants. No special application is needed for these awards.

Other sources of scholarships are states, Parent-Teacher Associations, church groups, veterans' groups, Rotary Clubs, and other civic organizations.

Start early

A college-bound student should start investigating scholarships early in the junior year of high school. Sources of information are the school principal, guidance officer, financial-aid office of the college, and the state's Department of Education.

A candidate should be familiar with the various testing programs used in picking scholarship winners, particularly the Scholarship Qualifying Test, offered to secondary-school students in October of every year; the National Merit Scholarship Qualifying Test, given in April; and the College Entrance Examination Board Tests, given in December, January, February, March, and May.

WORKING AT COLLEGE

Plenty of students still pursue the time-honored tradition of working their way through college—but few come even close to meeting all their expenses this way. College costs have soared, and the earning power of a student is low. Nevertheless, there are opportunities for the student with the energy and willingness to hold down a job and study at the same time.

Colleges themselves offer jobs, such as waiting in dining halls or helping in the library. Outside opportunities could include doing research, working at a gas station, being a sales clerk, tutoring. Keep in mind that it's easier for a college student to find work in a large city than in a small college town where the students may outnumber the residents.

How much can they earn?

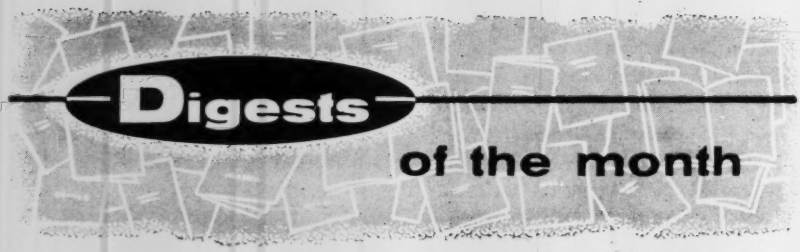
What can the college student earn during the school year? A survey of 100 colleges made last year showed a wide range—$150 to $830 for men and $100 to $500 for women. Most of the colleges surveyed suggested that a student would be wise not to work more than 20 hours a week, and many suggested 15 hours as a maximum. Many colleges suggest that a student working too many hours should cut down his job hours and borrow the money he needs.

During summer vacation, a student can devote more time to a job and earn more money. In the survey mentioned, over 30 colleges reported that the summer earnings of their men students averaged $600 or more. Twenty-nine colleges reported an average of $400 for women. Skills useful for summer jobs: house painting, lawn and garden care, landscaping, typing, bookkeeping, keypunch operating, surveying, sales promotion, truck driving, computer programing, bulldozer operating, tree surgery, accounting, drafting, welding.

Some companies give summer jobs to students as part of a training program for prospective employees.

Many resources

Chances are, you'll have to use more than one of the financing methods we've discussed here to meet college costs. It won't be easy to put your children through college. But the many resources available should go a long way toward helping you swing it. ♦



STREAMLINED MANAGEMENT

EFFECTIVENESS is not built into a manager. Making full use of your ability and experience requires solid concentration on four essentials.

Find priorities

Do a few jobs well. "I'm so busy I don't get any work done," is a common quip around many companies. But it's no joke; it is the situation typical of an ineffective manager. He tries to do a little bit of everything. And the more he does, the less he gets done.

To concentrate on a few jobs and do them well is the first rule of effectiveness. A manager must, therefore, set priorities: What are the two, three, or four important contributions I have to make? Which jobs, done well, will make a difference in the performance of my department or the performance of my company?

To find these priority tasks, a manager starts with these questions: What results do we need? What does the business require from me and my unit? What does the boss require from me to get the right results in his job? The question, "Where do we want to go?" always precedes "How do we get there?"

This approach does more than bring out the priority areas. It produces another requirement for managerial effectiveness: working communications between a manager and his boss. Instead of worrying about what to expect from the boss, the effective manager knows what the boss expects of him and his unit. This means that whatever the unit produces will be effective, and will make sense to the people who have to use the results.

The accent on priorities applies not only to the work a manager does himself; it applies equally to the work of his department. Effective managers concentrate their department's work on a small number of major tasks. It is a business axiom that a small number of events often account for most of the obtainable results. Ten items in a product line of 1,000 usually produce three quarters of the sales; a handful of customers, among many thousands, often account for the majority of orders; a few workers often

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cause the bulk of accidents, absenteeism, or grievances.

Where does the time go?

Know how to spend time. Knowing the priorities will not make a man an effective manager unless he gives them the time they need. Time is a manager's scarcest and most perishable resource; in the words of one executive, it "should be bought only in the large economy package."

Twenty slugs of ten minutes each spent on an important job are rarely as productive as sixty minutes spent in one concentrated chunk. A hundred driblets of two minutes each will rarely produce anything at all.

Few managers are aware of how they spend their time. One expert on the use of time has had his secretary run such a check on him every six months for years. The results still make him blush.

Off with the old

Eliminate the obsolete. Less important matters are always overwhelming unless you have a system to push them out of the way. A cause of managerial ineffectiveness is the lack of a system for finding out which of today's procedures should be dropped.

It is a manager's job to keep his organization lean, young, flexible, and eager for new things. This requires that the obsolete be dropped. There is only one way: Put every operation on trial for its life every two or three years. The question should be asked periodically, and preferably on a schedule: "If we were not doing this today, would we start it?" If the answer is "no," the operation is ready to be abandoned.

Trial run

Test new ideas. Many managers try to "train a swimmer by the side of the pool"—to work out details on paper that can be worked out only in practice.

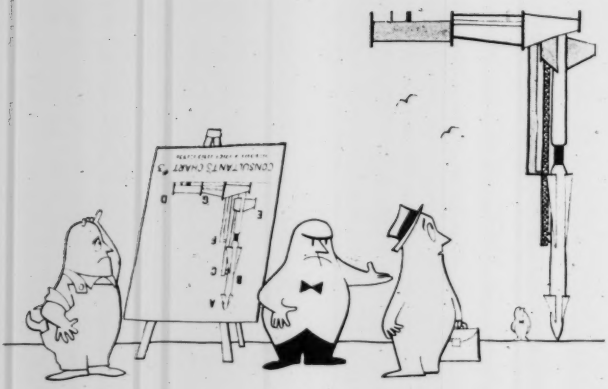
Someone in a manufacturing meeting wonders whether the process would be speeded up by putting a little more metallic powder into the molds. Instead of running a trial, some people will argue theoretical physics for hours. Or they'll say, "Let's make another study," even though everyone knows that nothing new could possibly come out of it. This simply postpones the time when they have to make a decision.

Usually everyone can agree on a fairly narrow range within which the right decision is likely to fall. After this, as a rule, the correct adjustment can be made only in application.

• *Peter F. Drucker*
NATION'S BUSINESS
April, 1961

I DREAD SUCCESS. To have succeeded is to have finished one's business on earth. I like a state of continual becoming, with a goal in front, and not behind.

—GEORGE BERNARD SHAW



The Freedom to Make Mistakes

IT IS PART of a manager's responsibility to help his subordinates develop, to create the climate in which they will grow at the maximum rate, with maximum results. There is an important way we can contribute to this environment, and that is by allowing subordinates greater freedom to make mistakes.

This does not mean that we should advocate, or even tolerate, any sort of comedy of errors. Some mistakes can be extremely expensive; all are wasteful.

But we do want creative people who can come up with new ideas, experimentation, different approaches, and unconventional solutions to conventional problems.

A matter of confidence

The man who seeks innovation is likely to make some mistakes. But isn't it more desirable to assure him a reasonable measure of freedom to spark some fresh, imaginative thinking, than to slap him down when he commits his first error—and perhaps discourage him from trying again?

Let's be practical: We can't do everything ourselves. How much better it is, then, to give our subordinates our confidence. In return for this confidence we must require strict accountability. There is a point somewhere along the line where a man can lose the confidence you have placed in him if his errors in judgment prove him unworthy of it.

Yesterday's solutions

But too many companies overpenalize the mistake and undercredit the fresh and new. Consider the manager who says, "Here's the way we handled it last year and the year before—and we'd better handle it the same way this year." What he's actually saying is, "It's the safe old way; therefore, it's the only right way." He's got to learn that things are changing every day—and they'll continue to change;

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so he must change with them. If a manager continues to apply yesterday's solutions to tomorrow's problems, the problems just won't get solved.

Management today is faced with plenty of old problems, old frustrations, old fork-in-the-road decisions. Most of them are probably disposed of in some way or other. New problems lie ahead; management has never faced them before; in fact, they aren't even in the textbooks yet. If you relegate a man to his own little box of conformity—and forbid him because of fear of an error to move outside that box—there is little chance that he will bring anything new to bear on any problem.

Maybe one man has an exciting new idea. Maybe he's itching to take a crack at putting it into practice. Good. If you think you can, give him the chance.

But what if the idea doesn't work out? If there's a reprimand, what happens? Every time someone's enterprising spirit is stifled even a little, every time a spark of originality is snuffed out, we are choking off the very taproots of a precious fund of creativity.

One manager was asked whether or not he permitted his subordinates the freedom to make mistakes. He replied: "The people in my department don't make mistakes. They may come up with some pretty harebrained ideas—some of them simply not workable. But when they do, we don't kill their creativity by telling them they've made a mistake. Rather, they're advised tactfully to try again and use a different approach.

"And it's a funny thing," he added as an afterthought. "Some of those ideas we once thought were a little far out have now become part of our standard operating procedure. Certainly, our employees have the freedom to make mistakes—how else would the company progress?"

• *William T. Brady*
DUN'S REVIEW AND MODERN INDUSTRY
June, 1961

Here's What the Arbitrator Said

(See "Time Out for Coffee," page 17)

THE COMPANY WON. The arbitrator said that the only working condition involved was the right to a coffee break, not the right to a coffee break at irregular hours. Far from challenging the right of employees to a benefit, he added, what the company was doing was actually giving it official recognition. "The only thing that was done was to change the time of taking the break, or rather to establish the right to the break at a certain time during the working day."

NOTE: This award does not indicate how other arbitrators might rule in an apparently similar case. Arbitrators do not follow precedents. Each decision is based on the particular history, contract, testimony, and other facts involved.

ULTRASONICS | New Tool for Industry

A MODERN INDUSTRIAL TECHNIQUE cleans the dust-and-oil film from the most delicate watch. It can rub two metals together with such force that they flow into one piece with no evidence of heat. It can crush its way through the hardest diamond and leave a tiny hole of perfect dimensions.

Ultrasonics performs all these functions, and more. It uses powerful sound waves that are generally above the hearing range of the human ear. Industrial equipment based on ultrasonics is already operating in many plants; more of it will soon be machining, testing, cleaning, soldering, welding, and detecting for industry.

Sonic energy is the basic force in all sound waves. As the frequency of the sound waves increases, the pitch rises until it passes into an inaudible or "ultrasonic" range. Here are a few of the industrial applications of ultrasonics you may soon be seeing.

Scrubbing bubbles

A cleaning solution, like every liquid, contains countless tiny bubbles, ranging in size from those visible to the naked eye to submicroscopic ones. When vibrations of extremely high frequency are introduced into a solution, the sound waves that race through it cause the bubbles to pulse or collapse. Sonic energy is so great that when it compresses the bubbles, an immense vacuum is created, and forces of up to 15,000 pounds per square inch are generated at the center of the implosion. This phenomenal vacuum force combines with the pulsating action of the bubbles to act like millions of scrubbing fingers.

Sonically activated cleaning solutions can reach into tiny crevices where no other cleaning tool can go, providing microcleanliness in the gentlest possible way.

Burglars, beware

Ultrasonics is also used to protect closed areas, like offices and warehouses, against burglary. Ultrasonic waves are beamed into the area, and as long as there is no motion the ultrasonic waves reflected from the walls and ceilings—and from the material within the area—have the same pitch. But if there's any movement—even

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the flicker of a match—a different pitch is reflected. It is picked up by a receiver and sets off an alarm.

Enough equipment to protect up to 12,000 square feet operates on ordinary lighting current, and the electrical load is no more than that required for a light bulb.

Sensing by sound

Many automatic processes will soon be controlled by ultrasonic sensing and switching devices. Like an electric eye, which triggers a mechanism when a light beam is interrupted, the ultrasonic equipment uses two sensors and a control unit. Instead of using light, however, it uses high-frequency sound waves. The ultrasonic "ear" can "hear" solids or liquids, opaque or transparent objects, ferrous or nonferrous metals, and fast- or slow-moving objects. The beam can be made several feet wide, or thirty thousandths of an inch wide.

Possible uses in industry include counting, sorting, and routing; machine safety control; level control for liquids and solids; and positioning control.

Welding wonder

Another industrial use for ultrasonics lies in welding dissimilar metals —without the use of flux or any other intermediary material. It works this way: The two pieces to be welded are pressed together against the welding head. Then the head is vibrated ultrasonically. The sound-wave motion produced rubs them against each other with such force that they flow together and become welded.

In standard welding, the high temperatures required often change a tiny portion of the metals into gases, which contaminate other materials. Ultrasonic welding, however, uses much lower temperatures, so that this doesn't happen. And, since no current passes through the welding zone, there is no sparking or arcing to endanger the surrounding area.

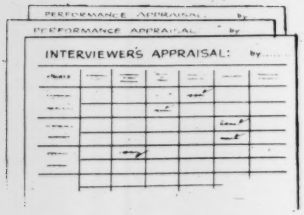
Drilling and milling

Ultrasonic machine tools can machine, drill, cut, and engrave intricate designs, shapes, and cavities in hard and brittle materials, including diamonds, tool steel, carbide, glass, ceramics, germanium, and ferrite. Ultrasonic machining is performed by a cutting tool oscillating approximately 20,000 times a second in an abrasive solution. The tool drives abrasive grains in the solution against the work piece, chiseling away minute particles. Ultrasonic machining can attain finishes of 10 microinches and tolerances of .0005 inches.

• *Robert P. Holton*
INDUSTRIAL DISTRIBUTION
April, 1961

THE MAN OF CHARACTER finds a special attractiveness in difficulty, since it is only by coming to grips with difficulty that he can realize his potentialities.

—CHARLES DE GAULLE



Ground Rules for Appraisal Interviews

MANY MANAGERS feel that conducting an appraisal interview is a sort of secret art that they'll never be able to master. Actually, any manager with reasonable sensitivity for the feelings of others can conduct an effective appraisal by following a few simple, straightforward principles.

First the job

1. *Before you discuss the man, discuss the job.* You and he may have different ideas about the exact nature of his responsibilities. If you have a short, written job description, review it together to see if it needs revision. If you do not have one, ask him questions like:

- What are *all* the things you do on your job?
- Which do you think are the most important?
- Which take most of your time?
- How do you think we could use your talents and your time more profitably?
- Do we agree on what your job is?
- Do we agree on the standards by which your performance should be appraised?

2. *Ask him before you tell him.* When you are ready to review a man's strengths and weaknesses, ask him to tell you what he thinks he has done well and what he would like to do better. He can criticize himself more readily than he can accept criticism from you. In fact, he may judge himself more severely than you would.

You may find some of the following questions useful:

- What do you think are your greatest strengths?
- Where do you feel less competent?
- Do you feel that you are growing more competent or less as time goes by? In what ways? How? Why?
- Have you been doing anything that you hope will increase your competence in any way?
- Is there any way you think that I, or someone else, could help you to make yourself more valuable to the company?
- Do I do anything that makes your job harder?

Listening

3. *Listen.* The effectiveness of your interview will increase with your un-

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derstanding of the man you are counseling. If you talk when he wants to talk, you may miss some of the best opportunities you will ever have to find out what makes him tick.

Listening is more than a matter of just keeping silent while the other person talks. Try to summarize in your own words what you think he has been trying to tell you. This gives him a chance to correct any misunderstanding. Try to detect the feeling behind what he is saying. If strong feelings are present, try to put them into words. You might respond, for example, by saying, "You're a little anxious about what's going to happen, aren't you?" or "You feel pretty bitter about this, don't you?" or "That gives you a real sense of achievement."

The more accurately you can recognize his feelings and the more calmly you can accept them, the better will be your chance of helping him tell you what is most important to him.

4. *If the subordinate appraises himself more favorably than you appraise him, invite him to tell you why.* Then, if you still disagree, restate his self-appraisal. Be sure you understand it. Let him see that you want to consider his judgment as well as your own and that you think his feelings are important even if you must disagree. Review, and state, the points on which you do agree. Then discuss your differences.

It takes perspective

5. *Get perspective on his mistakes.* In appraising a man's mistakes, consider the number of them in proportion to the number of decisions he had to make; consider how much freedom he was given to act on his own judgment; and try to remember his performance over a long period. In comparing the mistakes of two men, consider the relative difficulty of the tasks assigned to them.

6. *Try not to be influenced by your own bias if the facts do not affect a man's value to the company.* Watch for sources of bias like these:

- You are a clean-desk man. His desk is always cluttered.
- You and he share certain interests in work or recreation.
- He has some mannerisms that annoy you, though they do not seem to annoy anyone else.
- You are always punctual. He is usually a little late, though he makes it up by working overtime.
- You are aggressive. He is submissive.

Remember that you are trying to help men to develop *themselves*, so that they can give the company the best that *they* have to offer. You are not trying to remake your subordinates in your own image.

7. *When you must criticize, criticize the man's performance, not the man himself.* He may be able to change his performance. It is doubtful whether he can do much about changing himself.

8. *If you are partly at fault, admit it.* He may become more willing to admit his mistakes if you admit yours.

Taboos

9. *Never discuss another employee with him.* Unfavorable comparisons cannot be kept confidential. They always leak.

10. *If you want cooperation, do not undertake a performance interview too soon after a disciplinary interview.*

11. *Do not discuss salary or promo-*

tion during the performance appraisal. The discussion may be interpreted as a commitment. Instead, focus on trying to help the man improve in his present job.

Be yourself

12. *You don't have to agree on everything.* When you cannot agree, try to state your position and his so that each of you understands the other. Then tell him that you will continue to think about what he has said, and ask him to think about what you have said.

13. *Be yourself.* Don't try to copy someone else's counseling methods if they don't make sense to you. Try to find out how to conduct an interview in which both you and your subordinate can relax and be yourselves. You will get nowhere as long as you both put up a front.

Be realistic

14. *Don't try to do too much.* Unless you are unusually skillful or lucky, some goals will generally be beyond you. Four in particular are seldom attained:

- You cannot make an unfavorable appraisal a happy experience.
- You cannot make a suspicious man trustful.
- You cannot make a belligerent man cooperative.
- You cannot make a defensive man self-critical.

15. *If the subordinate is deficient and must be corrected, here are four suggestions:*

- Let him know exactly where he stands. Otherwise, he may suspect that your appraisal is worse than it actually is.
- Point out that if you didn't think he could become a satisfactory employee, you wouldn't be keeping him on the payroll.
- Tell him what you think he can do to improve.
- If he shows any desire to improve, offer your help.

For top producers

16. *For your top producers, try these ideas:*

- Identify the men you feel sure are potential managers and put their identification on the record.
- Let them know that you recognize and appreciate what they are doing for the company.
- Invite each man to tell you how he would like to develop himself, and what help he would like from you.
- Help him along these lines to the extent of your ability.

17. *It is more important to develop strength than to correct weakness.* Successful companies are run not by perfect men who have corrected all their faults, but by well-balanced teams of able men, each of whom has his own weaknesses.

Your job is not to produce supermen. Your job is to discover talent and develop it.

• *Robert Hoppock*
PERSONNEL
May-June, 1961

TO BE ALIVE at all involves some risk.

—HAROLD MACMILLAN

LOYALTY: *It's Up to You*

IT'S A FORTUNATE COMPANY that can count on the loyalty of its employees—not only in everyday activities, but also in emergencies. Many companies fail to win their employees' loyalty because their managers have unrealistic ideas of just what loyalty is.

Some believe, for example, that the company demands blind, unquestioning obedience, with never a voice raised in protest or disagreement. They think that a man is being disloyal if he raises what he considers a legitimate grievance; if he is less than enthusiastic about accepting a situation that seems to him unreasonable; if he questions the wisdom of a top-management decision.

These actions do not in themselves mean that the man is disloyal. He may be acting according to his own principles and beliefs, or those of the informal group he belongs to—and he may be right.

Not just a yes-man

If blind obedience is not company loyalty, then what is? It can probably be defined as a man's strong personal commitment to give more than adequately of his time, energy, talents, judgment, ideas, and moral courage in the best interests of his company.

Loyalty is demonstrated when the going is tough and a man assumes more work and responsibilities for the time being—perhaps at no additional pay—or when an employee patiently waits through departmental changes important to his job. These, of course, are unusual cases, but an employee can demonstrate loyalty in everyday activities, too—and the company can rightfully expect him to:

- Give a fair day's work, both in output and quality, for the salary he receives.
- Help build a harmonious relationship with his fellow workers.
- Respect company rules and the orders of his superiors.
- Respect the organizational structure and stay within channels when his work is reviewed and when he communicates a need, a proposal, or a grievance.
- Accept criticism and try to improve his performance.

Kinds of loyalty

An employee's loyalty to his company is actually many kinds of loyalty, and all employees possess them to some degree.

Loyalty to occupation: A man takes pride in, and is loyal to, his craft. He observes how well the company's operation measures up to accepted standards in his own field. High standards of performance will help the company improve its chances of winning his loyalty.

Loyalty to the work group: An employee is loyal to the people he works with. Studies show that this kind of loyalty significantly affects the group's cohesiveness, morale, and productivity even more than does a worker's loyalty to the company as a whole.

Loyalty to superiors: Another dimension of company loyalty is an employee's allegiance to his supervisor.

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If a supervisor demonstrates interest in his subordinates by training them, going to bat for them on key issues, and making unbiased recommendations for merit increases and promotions, the workers will usually form strong bonds of personal loyalty.

Motivation and morale

Most of the forces that motivate an employee to do his best work also influence his loyalty to the company. You are probably familiar with many of them:

- Having interesting work.
- Doing useful work and doing it well.
- Knowing that his pay will be as high as conditions permit.
- Working with congenial people.
- Knowing that he will win advancement, if he deserves it.
- Knowing that his job is secure as long as he does his part.
- Having a fair and understanding boss.
- Knowing of company developments that affect his work.
- Knowing definitely what is expected of him on the job.

The company that fills these basic needs as far as possible will probably be rewarded with the loyalty of its employees. The company that ignores them may find itself saddled with employees who remain only until another job comes along—and perhaps perform below par in the meantime.

A company is not only a structure for division of work and production; it is also a social system. An employee wants to belong to a work group that is friendly, that has a good record of achievement, and that he can be proud of. This kind of group stimulates him to do his best for it and for the company.

A group with poor morale is marked by bickering, absenteeism, tardiness, tension, poor performance, and lack of communication. A group with good morale usually has a spirit of cooperation and enthusiasm, higher output, good attendance, coordination and communication, and mutual esteem.

A manager who ignores these two important influences—motivation and morale—will supervise not cohesive groups, but groups with little loyalty. In building company loyalty, good supervision is crucial, for it is through the supervisor that employees find out whether management means what it says and practices what it preaches. It is through the supervisor that a worker learns whether or not loyalty is to be a two-way street.

• *Nathaniel Stewart*
MANAGEMENT REVIEW
Volume 50, no. 1

An index to SUPERVISORY MANAGEMENT is published annually in the December issue. The contents are indexed monthly in the *Business Periodicals Index* published by The H. W. Wilson Company. SUPERVISORY MANAGEMENT is microfilmed by University Microfilms, Ann Arbor, Michigan.

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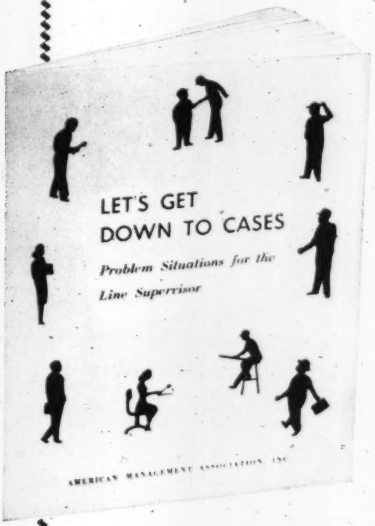

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